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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,949	09/18/2006	Marinus Frans van der Maas	VER-205XX	5558
207 7590 03/16/2009 WEINGARTEN, SCHURGIN, GAGNEBIN & LEBOVICI LLP TEN POST OFFICE SQUARE BOSTON, MA 02109				
EXAMINER CLEMENTE, ROBERT ARTHUR				
ART UNIT		PAPER NUMBER		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/567,949

**Applicant(s)**VAN DER MAAS, MARINUS  
FRANS**Examiner**

ROBERT A. CLEMENTE

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18, 20, 22 and 24-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 26 and 33-38 is/are allowed.
- 6) ☒ Claim(s) 1-9, 13, 15, 17, 18, 20, 22, 24, 25 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 10, 12, 14 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1 - 10, 12 - 18, 20, 22, 24, 25, 27, and 28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

2. The drawings are objected to because reference character "27" is still used to designate both a clamp fitting and transponder in the drawings. The specification has been amended to use reference character "26" to refer to the clamp fitting; however, reference character "26" has already been used to refer to a clamping ring. Based on the drawings, the clamping ring (26) in figure 2 and the clamping fitting (27) in figure 3 appear to be different parts. The reference character of the transponder or clamp fitting should be changed in both the drawings and the specification to a reference character that has not been used to refer to a different part. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement

sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 - 5, 8, 9, 13, 15, 17, 18, 22, 24, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,652,749 to Stankowski et al. in view of US Patent No. 6,551,503 to Niers et al.

Stankowski teaches an in-line filter provided with a substantially elongated filter housing in which filtering material is included, the filter housing being provided on a first end with an inflow opening and on a second, opposite end with an outflow opening, while at the inflow opening and the outflow opening fastening means are provided for fastening a supply or discharge tube, respectively, wherein the fastening means are quick-change couplings, a respective quick-change coupling having a coupled condition and an uncoupled condition, while in the quick-change coupling a shut-off valve is provided which, in the coupled condition, assumes an open position and thus allows gas to pass and which, in an uncoupled condition, assumes a closed position

and thus does not allow gas to pass. Figure 1 of Stankowski shows an inline filter (12) provided with a substantially elongated filter housing. The filter (12) inherently includes filtering material. The filter has a coupling (20, 21) at each end that form the inflow and the outflow openings. The receivers (19, 22) form the other part of the fastening means that provide a supply and discharge tube. As shown the fastening means can be considered to be quick change couplings since the couplings (20, 21) just need to be slid into the receivers, which allows for a quick change. A valve (25, 26) is provided with both quick change couplings. In the coupled position the valve are open and in the uncoupled condition the valves are closed and no flow is allowed. Stankowski does not disclose providing a transponder with the filter. One of ordinary skill in the art, however, would reasonably expect that a user would benefit from a simple means to determine some basic identifying data about the filter, such as the type of filter medium, the date of installation, or the expected lifetime. Niers discloses a filter element of the annular cylindrical type. As disclosed in column 1 lines 13 - 21, the filter of Niers includes a micro circuit integrated into the filter element that contains information about the type of filtering element, the time it was installed, etc. As disclosed in column 2 lines 24 - 27, the micro circuit can be a transponder so the data can be read by a receiving element.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski to include a transponder in the in-line filter as suggested by Niers in order to provide a user a means to easily identify information such as the type of filter element or the time of installation.

In regard to claim 2, as shown in figure 1, Stankowski provides one of the valves (25) in the supply or discharge tube, but the other valve (26) is provided in the coupling (21) of the filter. Thus, Stankowski does not disclose the shut-off valve of the quick change coupling at both the inflow and outflow openings to remain connected to the supply or discharge portions. One of ordinary skill in the art, however, would reasonably expect that the connection could be formed in an equivalent manner by using the identical top and bottom couplings with the valve in the supply or discharge parts. One of ordinary skill in the art would also reasonably expect that there may be situations where the entire filter needs to be replaced, in which case it would not be desirable to have to dispose of and replace a filter with a valve that will make the filter more costly. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski to include both shut-off valves in the supply or discharge tubes so that the filter could be produced more cheaply without a valve and eliminating the need to dispose of an operating valve given the need for filter replacement.

In regard to claim 3, the couplings (20, 21) form male parts and the receivers (19, 22) form female parts of the quick change coupling. As shown, a bore extends, which forms the fluid communication between the supply or discharge tube, respectively, and the inflow opening or outflow opening, respectively, of the filter housing, while, with the male parts (20, 21) and the female part (19, 22) in coupled condition, the quick-change coupling is in the coupled condition and with the male part and the female part in uncoupled condition, the quick-change coupling is in the uncoupled In regard to claim.

In regard to claim 24, as discussed above with respect to claim 3, the couplings (20, 21) form male parts and the receivers (19, 22) form female parts of the quick change coupling. The male and female parts would remain the same regardless of the placement of the valves. As shown, a bore extends, which forms the fluid communication between the supply or discharge tube, respectively, and the inflow opening or outflow opening, respectively, of the filter housing, while, with the male parts (20, 21) and the female part (19, 22) in coupled condition, the quick-change coupling is in the coupled condition and with the male part and the female part in uncoupled condition, the quick-change coupling is in the uncoupled condition.

In regard to claims 4, 5, and 25, Stankowski shows the male parts to be connected to the filter and the female parts to be connected to the supply and discharge lines. One of ordinary skill in the art, however, would reasonably expect the location of the male and female parts to be a matter of design choice. As long as a coupling has both a male and a female part, it is not critical which part is located on the filter, or the supply or discharge tube. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski to include the female parts on the filter and the male parts on the supply and discharge tubes as a matter of design choice since the location of the male and female parts is not critical and the couplings would function in a substantially equivalent manner.

In regard to claim 15, given the obvious modification discussed above where the female parts are located on the supply and discharge tubes, the female parts and filter housing would inherently be connected by a detachable connection.

In regard to claim 8, as discussed above, it would have been obvious to both include both valves in the supply and discharge tubes and to use the male parts on the supply and discharge tubes. Thus, performing both of these modifications of Stankowski would inherently lead to both shut-off valves being located in the male part on the supply and discharge tubes.

In regard to claim 9, as shown in figure 2a, the valve (26) of Stankowski in the coupling (21), or male part, is biased closed by a spring (11). The valve inherently would remain the same given the modification where the male part is located on the supply or discharge tube.

In regard to claim 13, as discussed in paragraph 12, Stankowski discloses a coupling where the male and female parts are pushed together. Stankowski does not disclose connecting the male and female parts by screw thread. The use of screw thread to connect male and female parts, however, is well known in the art. One of ordinary skill in the art would reasonably expect that couplings with the male and female parts only pushed together and held by friction could be susceptible to becoming inadvertently disconnected by a user that accidentally knocks into the filter, or supply or discharge lines. Screw connections need to be twisted for disconnection and predictably are more resistant to being accidentally disconnected. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski to include screw threads to connect the male and female parts in order to avoid the possibility of the filters becoming accidentally disconnected, given a situation where the



filters are used in a location where the users are susceptible to knocking into the filter or the lines connected to the filter.

In regard to claims 17, 18, and 27, as discussed in column 3 lines 58 - 60, the filter (12) of Stankowski can include a reusable housing having a disposable inner cartridge. In this case, the inner cartridge can be considered the substantially elongated filter housing, as broadly claimed, and the reusable housing can be considered a protective shell, as broadly claimed. Since the protective shell is part of the filter (12) and the entire filter is between the receivers (19, 22), or female parts, the protective shell is inherently between the female parts.

In regard to claim 22, Stankowski does not distinctly disclose the separation process to be undertaken or the use of a temperature sensor in the filter. One of ordinary skill in the art, however, would reasonably expect that in many filtration situations it would be beneficial to know the temperature of the fluid leaving the filter. As discussed in column 2 lines 28 - 34 of Niers, the micro circuit connected to the transponder can be of the type that is capable of measuring pressure and temperature. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski to include a micro circuit temperature sensor and transponder in the downstream end of the filter housing as suggested by Niers in order to provide the user with data on the temperature of the fluid leaving the filter.

5. Claims 6, 20, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stankowski and Niers as applied to claims 1 - 5, 8, 9, 13, 15, 17, 18, 22, 24, 25, and 27 above, and further in view of US Patent No. 5,478,378 to van der Maas et al.

Stankowski and Niers are discussed above in section 4. Stankowski is used as the primary reference disclosing the in-line filter (12). Stankowski does not distinctly disclose the type of filter (12) used and discloses in column 3 lines 16 - 20 that the separation system of his invention is useful for many fluid separation processes. Van der Maas discloses a filter with a quick-change coupling for cleaning gases. The filter (1) of van der Maas includes a glass filter housing (2) and a transparent guard (11), which forms a protective shell. The filter housing is filled with a filter material (6) and includes an indicator (7) which colors upon saturation of the filter material (6). The filter also includes permeable elements (9, 10), or sieves, in the inlet and outlet channels of the filter. Although the filter (1) is shown in a generally U-shaped form, one of ordinary skill in the art would reasonably expect it could similarly be constructed in an in-line form.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stankowski and Niers to include an in-line filter with a glass housing and a transparent shell of the type of van der Maas in order to allow the system to be used for the known process of gas cleaning. Additionally, the male parts (20, 21) of Stankowski form the inlet and outlet channels for the filter. Thus in the combination, the porous elements (9, 10), or sieves, of van der Maas would inherently be located in the male parts (20, 21) of Stankowski in order to hold the filter material in the in-line filter.

6. Claims 7 and 31 rejected under 35 U.S.C. 103(a) as being unpatentable over Stankowski and Niers as applied to claims 1 - 5, 8, 9, 13, 15, 17, 18, 22, 24, 25, and 27 above, and further in view of US Patent No. 4,357,237 to Sanderson.

Stankowski and Niers are discussed above in section 4. Stankowski is used as the primary reference disclosing the in-line filter (12). As discussed above In regard to claim 4, it would have been obvious to one of ordinary skill in the art to include the male parts on the manifolds of Stankowski. These manifolds inherently must be connected to some kind of supply and discharge tube to supply the fluid to the filter, however, Stankowski does not disclose how the fluid is supplied to or discharged from the manifolds. Sanderson discloses an in-line device for the magnetic treatment of fluids. The device is not a quick-change device, but uses fittings with flexible hoses (46, 48) attached. As shown in figure 1, the hoses (46, 48) are held on by hose clamps (35). One of ordinary skill in the art would predictably expect that flexible hoses form a simple and cost effective means to connect upstream and downstream devices to separation components.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Stankowski and Niers to supply and discharge the fluid stream to the manifolds, which form the male parts, using hoses held on by clamps as suggested by Sanderson since flexible hoses provide a well known and simple means to connect parts of a fluid treatment system.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stankowski and Niers as applied to claims 1 - 5, 8, 9, 13, 15, 17, 18, 22, 24, 25, and 27 above, and further in view of US Patent No. 6,425,946 to Funke et al.

Stankowski and Niers are discussed above in section 4. Stankowski is used as the primary reference disclosing the in-line filter (12). Stankowski does not disclose the type of filter medium used or the specific fluid to be treated. Funke discloses a gas purifying device that uses adsorption materials to remove impurities from inert gases. As disclosed in column 3 lines 19 - 31, the purifier can be a two-component system that removes impurities such as water, oxygen, and hydrocarbons. As shown in figure 4, the purifier can include a carbon material (14) and a secondary material held in a canister (264). As disclosed in column 11 lines 32 - 36, the secondary material can comprise alumina, silica, and other molecular sieves. Carbon, alumina, and silica are all materials that do not contain alkali or alkaline earth metals. One of ordinary skill in the art would predictably expect the adsorption materials of Funke could be loaded into a quick-change canister.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stankowski and Niers to include an in-line cartridge holding adsorption materials as suggested by Funke in order to provide the system with a well known means to remove impurities from an inert gas fluid stream.

8. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stankowski, Niers, and van der Maas as applied to claims 6, 20, and 29 above, and further in view of US Patent No. 6,425,946 to Funke et al.

Stankowski, Niers, and van der Maas are discussed above in section 5.

Stankowski is used as the primary reference disclosing the in-line filter (12) and van der Mass teaches a gas filter having the glass housing, shell, and indicator. Neither Stankowski nor van der Mass, however, discloses the type of material used in the filter. Funke discloses a gas purifying device that uses adsorption materials to remove impurities from inert gases. As disclosed in column 3 lines 19 - 31, the purifier can be a two-component system that removes impurities such as water, oxygen, and hydrocarbons. One of ordinary skill in the art would predictably expect known indicators are available to detect the presence of these impurities after they saturate the filter material. As shown in figure 4, the purifier can include a carbon material (14) and a secondary material held in a canister (264). As disclosed in column 11 lines 32 - 36, the secondary material can comprise alumina, silica, and other molecular sieves. Carbon, alumina, and silica are all materials that do not contain alkali or alkaline earth metals. One of ordinary skill in the art would predictably expect the adsorption materials of Funke could be loaded into a quick-change canister.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stankowski, Niers, and van der Maas to include an in-line gas cleaning cartridge holding adsorption materials as suggested by Funke in order to provide the system with a well known means to remove impurities from an inert gas fluid stream.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stankowski, Niers, and Sanderson as applied to claims 7 and 31 above, and further in view of US Patent No. 6,425,946 to Funke et al.

Stankowski, Niers, and Sanderson are discussed above in section 6. Stankowski is used as the primary reference disclosing the in-line filter (12). Stankowski does not disclose the type of filter medium used or the specific fluid to be treated. Funke discloses a gas purifying device that uses adsorption materials to remove impurities from inert gases. As disclosed in column 3 lines 19 - 31, the purifier can be a two-component system that removes impurities such as water, oxygen, and hydrocarbons. As shown in figure 4, the purifier can include a carbon material (14) and a secondary material held in a canister (264). As disclosed in column 11 lines 32 - 36, the secondary material can comprise alumina, silica, and other molecular sieves. Carbon, alumina, and silica are all materials that do not contain alkali or alkaline earth metals. One of ordinary skill in the art would predictably expect the adsorption materials of Funke could be loaded into a quick-change canister.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Stankowski, Niers, and Sanderson to include an in-line cartridge holding adsorption materials as suggested by Funke in order to provide the system with a well known means to remove impurities from an inert gas fluid stream.

***Allowable Subject Matter***

10. Claims 11, 26, and 33 - 38 are allowed.

11. Claims 10, 12, 14, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT A. CLEMENTE whose telephone number is (571)272-1476. The examiner can normally be reached on M-F, 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RAC

/DUANE SMITH/  
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